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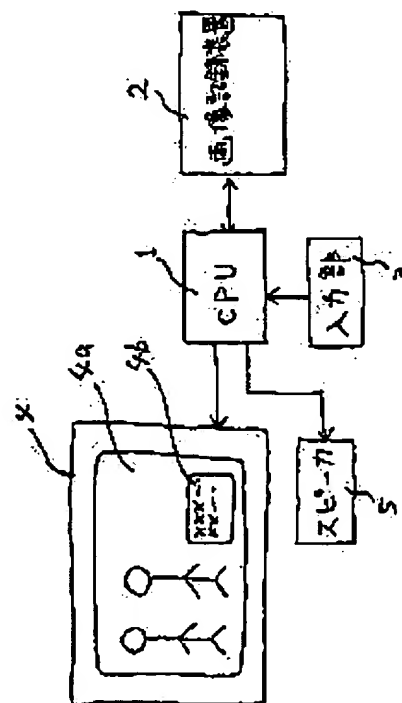
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(54) IMAGE RELATED INFORMATION SUPPLY SYSTEM

(57)Abstract:

PROBLEM TO BE SOLVED: To provide an image related information supply system which needs no intervention of a special data base system and also never disturbs the appreciation of art for a user.
SOLUTION: This system includes a CPU 1, an image recorder 2 comprising a hard disk device, a CD-ROM device, a DVD digital video disk), etc., and records the image of an object of art, an input part 3 where a user inputs a prescribed instruction or the data to the CPU 1, a display 4 consisting of a liquid display device, etc., which is controlled by the CPU 1 and shows a prescribed image and its related information recorded by the recorder 2, and a speaker 5 which is controlled by the CPU 1 and outputs the prescribed voice information recorded by the recorder 2 in voices. Then the recorder 2 records the image information and also its related information that is embedded into the image information as an 'electronic

watermark' and explains the image information.

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DETAILED DESCRIPTION

[Detailed Description of the Invention]
[The technical field to which invention belongs] this invention relates to the picture
related information offer system which can output the related information to a
character or sound (voice and sound), displaying a picture.
[0002]
[Description of the Prior Art] Conventionally, database system which outputs the
related information in written form is put in practical use, displaying a picture. This
system makes a certain image data and alphabetic data as the description data
associate and record, and is recorded as a database. That is, when a certain picture is
displayed and you wish presenting of the related information, the data of relation are
called and it is made to display in written form etc. from a database.
[0003] Moreover, accompanying information, detailed information, and related
information, such as a place, a building, etc. which have been reflected in it recently at
image information (on-the-spot photo picture) What (for example, detailed information,
such as the name of a place of the place reflected in the background of a real map
image and a store which lives in each story of the building reflected into it) is
embedded for (it adds) it is proposed (this proposal -- report "of Nikkei Industrial
Daily as of May 19, 1998 -- the ****** on-the-spot photo screen from East Daisei --
place comparison is carried out and introduced to specific related information offer
etc. at use") in addition, this report has begun from the beginning "Masao Sakauchi
enjoyment of Manufacturing Engineering Research Center, the University of Tokyo,
developed the basic system which guesses the place and construction name right from
the building reflected in on-the-spot photo screens, such as scenery,"
[0004]
[Problem(s) to be Solved by the Invention] By the method of making image data and
the alphabetic data of the related information associating and recording on the above-
mentioned database, when it is going to output a certain related information, you have
to call related information through database system. That is, surely, "not only image
data" but "the database system (database system with a certain amount of scale)
containing the image data and related alphabetic data, and the computer program for
databases" will be needed, and the whole system will become big.
[0005] Moreover, the report of above-mentioned Nikkei Industrial Daily as of May 19,
1998 "University of Tokyo However, as long as it sees from the photograph (what the
character "Nogizaka" of the photograph of a street is mostly displayed on a part for a
central background as) appended to this report, while displaying the picture, it is
expected that the name of a place etc. is displayed into the display image. That is, the

system currently introduced to this report only makes it the content to add the character of related information etc. to a picture simply, and if a picture is displayed, it will be considered that characters, such as related information, will also surely be displayed together automatically. However, the thing for which related information, such as the name of a place and a building name, is surely displayed when displaying a picture in this way When carrying out image display in order to appreciate the image of a work of art although it is satisfactory if the picture is displayed for the purpose of [, such as a map for navigation,] practical use It becomes the hindrance of appreciation of a user and (if a character etc. is freely displayed for some users, the interest of art appreciation will be lowered) is not desirable if related information, such as a character which is not the work of art itself, is displayed automatically.

[0006] this invention is made paying attention to the trouble of the above conventional technology, and it aims at offering the picture related information offer system which does not have a bird clapper in the hindrance of art appreciation of a user, without making the database system containing the special computer program for databases (software) intervene.

[0007]

[Means for Solving the Problem] 1. Image Information Record Means for Recording Image Information, and in the Aforementioned Image Information The related information record means for embedding as "digital watermarking" so that it may make it possible not to usually output the related information (description sentence of the picture etc.) relevant to the picture, When the image display means for displaying the aforementioned image information and the aforementioned image information are displayed, The picture related information offer system characterized by including the related information output means for outputting the aforementioned (reading the aforementioned "digital watermarking" information) related information to a character or sound based on selection and directions of a user (based on specific directions of a user).

2. Image Information Record Means for Recording Image Information, and Specific Person in One Image Information, The particular-part picture discernment record means for recording the particular-part picture which shows specific portions, such as natural objects, such as animals and plants, a mountain, and a river, a building, or a machine instrument, as it is discriminable from the picture of other portions, In the particular-part picture recorded by the aforementioned particular-part picture discernment record means The related information record means for embedding as "digital watermarking" so that it may make it possible not to usually output the related information (description sentence of the particular-part picture etc.) relevant to the particular-part picture, When the image display means for displaying the aforementioned image information and the aforementioned image information are displayed, It is based on selection and directions of a user (based on specification of a user's particular-part picture, and specific directions). (Reading the aforementioned "digital watermarking" information) The picture related information offer system characterized by including the related information output means for outputting the related information of the particular-part picture the above was specified to be to a character or sound.

3. Image Information Record Means for Recording Image Information, and in the Aforementioned Image Information The related music information record means for embedding as "digital watermarking" so that it may make it possible not to usually output the related music information (for example, background music suitable for the

picture etc.) relevant to the picture, When the image display means for displaying the aforementioned image information and the aforementioned image information are displayed, The picture related information offer system characterized by including the related music information output means for outputting the aforementioned (reading the aforementioned "digital watermarking" information) related music information to sound based on selection and directions of a user (based on specific directions of a user). In addition, "the related music information" on this invention is "musical piece information" (for example, classic sound of the sensibility which was quiet and settled down when it was the pictures of the sensibility which was quiet and settled down which easy information) suitable for BGM (back ground music) when appreciating for example, the aforementioned picture. [of the aforementioned picture] Moreover, "the related music information" on this invention is musical piece information, such as a hymn of the Christianity relevant to the content of the religious painting, when for example, the aforementioned picture is a religious painting describing Jesus Christ of Christianity. Moreover, the "relation name music information" on this invention is musical piece information on a Christmas song, when for example, the aforementioned pictures are the pictures relevant to Christmas, and when the aforementioned pictures are the pictures describing Hawaii Islands, it is information on the ethnic music of Hawaii.

4. Transmitting Person Image Information Record Means for Recording "Transmitting Person Picture" Information Which Shows Transmitting Person for Appending to Conversation of E-mail or Chat, or Its Other Self, Such as Real Map Image and Character In the aforementioned transmitting person image information, the transmitting person's profile, career, self-introduction, Or the transmitting person related information record means for embedding as "digital watermarking" so that it may make it possible not to usually output "the related information about a transmitting person", such as a recent-state report of self When the image display means for displaying the aforementioned image information and the aforementioned image information are displayed, It is based on selection and directions of the addressee of the conversation of the aforementioned E-mail or a chat. The picture related information offer system characterized by including the transmitting person related information output means for outputting) and the aforementioned (reading the aforementioned "digital watermarking" information) transmitting person related information to a character or sound based on (for example, specific directions of a user. That is, in this invention, the above "a transmitting person picture" is "pictures, such as a photograph, a photograph of his face, and the other self character (ABATA)," of a mail transmitting person or a speaker appended to the conversation of an E-mail or a chat (chat of the real time developed by the virtual space on an online-communications network). By this invention, their own (transmitting person) "data self-introduction, for a recent-state report, etc." is embedded as digital watermarking into "the photograph and the picture of ABATA" which are appended to such an E-mail and a chat, and this picture can be transmitted by the Internet etc. together with an E-mail sentence etc. And the addressee which received this E-mail etc. can read "the data of self-introduction or a recent-state report" embedded into it in this appended "picture", and can be made to output them by character representation or the voice output.

[0008] In addition, in this invention of the above 1-4, the term a "picture" contains not only real map images, such as a photograph, but a character picture, an animation picture, an illustration, etc. of imagination. Moreover, a "picture" contains not only a

still picture but an animation. Moreover, the term "related information" is used in the detailed information which shows the description information which explains specific monochrome, such as a person in a picture, an animal, vegetation, a building, or a machine instrument, profiles, such as the aforementioned person, etc., and the meaning including accompanying information etc. namely, to the "related information" in this invention (1), when the picture is an on-the-spot photo [for example,] description of the time which took a photograph of the picture on the spot, a place, a photography person, and its place etc. -- containing -- (2), when the picture is a picture of imagination, such as animation and computer graphics (CG) explanation of the scenes (scene of a game etc.) of the picture, an author name, etc. -- containing -- (3), when the picture is the on-the-spot photo of works of art, such as pictures and sculpture Description (by the man of the age of about what time, it belonged to the school of what art) of the author name of the work of art, a work name, and the author, description (the work was made under what background and circumstances about what time) of a work, etc. are included.

[0009]

[Embodiments of the Invention] Operation form 1. drawing 1 is the outline block diagram showing the operation form 1 of this invention. The image recording equipment for 1 recording CPU (central processing unit) and 2 recording the picture of a work of art etc. in drawing 1 (For example, it consists of a hard disk drive unit, CD-ROM equipment, DVD (digital videodisc) equipment), etc., The input section for a user performing predetermined directions and a predetermined data input to CPU1, as for 3, The display for displaying the predetermined picture and predetermined related information which 4 was controlled by CPU1 and recorded on the aforementioned image recording equipment 2 (for example, it consists of liquid crystal displays etc.), the loudspeaker for outputting with voice etc. the predetermined related information which 5 was controlled by CPU1 and recorded on the aforementioned image recording equipment 2 -- it comes out In addition, the aforementioned display 4 is equipped with the picture in picture function which can combine and display comparatively small child screen 4b into comparatively big parent screen 4a and this parent screen 4a. In this operation form 1, it is image information and the information embedded as "digital watermarking" into this image information, and the related information for explaining the aforementioned image information is recorded on the aforementioned image recording equipment 2. It is the information which it can avoid outputting when a picture is usually displayed as the information embedded as "digital watermarking" here, for example, only when existing special processing is carried out, it is the information outputted by the voice output from the character representation or the loudspeaker (or an earphone and a bed phone) on a screen etc.

[0010] Here, "digital watermarking" is explained. "Digital watermarking" is present and (1) protection of copyrights (by embedding the digital signature of an author's ID information or an author to a picture or musical piece data). (2) cryptocommunication which makes discovery of an unapproved copy easy and inhibits an unapproved copy (another information to conceal to a picture or voice is embedded, and it uses as a kind of cryptocommunication), (3) It is used for four the use and the purpose of data alteration prevention (if digital watermarking is embedded in the picture and someone corrects behind, it will enable it to judge the existence of an alteration, as digital watermarking disappears), and discernment of (4) contents.

[0011] When "digital watermarking" used for such the various purpose is seen technically, it has various technique. That is, "digital watermarking" is "general term of

the technique of embedding a certain information to contents", and is the aggregate of various technique technically. Also in the various technique, the main things have two of the methods using "frequency conversion" in the present condition by the method which adjusts the brightness of a screen by the still picture or the animation, music, etc. Below, these two technique is explained. The above sentence and the following sentences are quotations from the page 81 of "Nikkei multimedia May, 1998 issue of the Nikkei Business Publications issue. "The most general technique embeds digital watermarking by changing the brightness of a screen. It decides on the place which embeds digital watermarking as the picture, and change is added to the bit string showing the brightness of the place (pixel). For example, there is the method of embedding digital watermarking at the least significant bit of a bit string (refer to drawing 2 .). In addition, this drawing 2 is quotation from the aforementioned page 80 of "Nikkei multimedia May, 1998 issue. This drawing 2 shows the method which embeds digital watermarking by changing the brightness of the pixel of a picture. Like drawing 2 , although the brightness of each pixel is expressed by the number of bits, the bit string which expresses another information with adjusting this number of bits is embedded as "a watermark." In fact, more complicated processing of expressing 1 bit with the combination of two or more pixels etc. is performed. If this processing is performed by eight places of a screen, 8-bit information will be buried and put. And since there is almost no change in appearance, existence of a watermark does not need to be noticed. Of course, actual processing is not this much simple. It is because digital watermarking disappears simply now in the cases, such as digital compression. For this reason, in case 1-bit data are embedded, a little more complicated processing of expressing the 1 bit etc. is needed by combining brightness change of two or more pixels. In the case of a music content, "frequency conversion" is used. Frequency conversion is the technique of decomposing a wave with complicated sound etc. into two or more simple waves called frequency component, and is used also as a component engineering of digital compression. Digital watermarking embeds information with manipulating at this frequency component. If it returns to the wave of after that origin, watermark information will serve as very few noises, and will not be noticed by the televiewer. Also in a picture, it can be regarded as a wave and it can carry out frequency conversion of the change of the brightness of a screen. For this reason, into a picture, the embedding of digital watermarking by frequency conversion is possible, and the technology of NEC has adopted this method. Completely different technology is used for the digital-watermarking technology of putting a chief aim on the information embedded like cryptocommunication on the other hand. For example, it depends for the digital-watermarking technology of SteganoFAX98 of Okikazu on the data compression technique of facsimile. Facsimile applies a data compression by transposing the image data read by the scanning line to form "how many white pixels continue [the pixel of the black from this point] from how many pieces and a degree." SteganoFAX98 is spaced by the method of adjusting the number of pixels of this black and white, and is embedding information. Thus, digital-watermarking technology is of infinite variety, and is properly used for every use. " (it quotes above from the page 81 of a "Nikkei multimedia May, 1998 issue of the Nikkei Business Publications issue)
[0012] To the image recording equipment 2 of drawing 1 , the related information for explaining the picture into the information on each picture is embedded using the technology of the above "digital watermarking." When a user directs the display of the on-the-spot photo picture of a certain pictures in the aforementioned image recording equipment 2, CPU1 displays the pictures picture of relevance on parent screen 4a of a

display 4 (in this system, since the aforementioned related information is recorded as "digital watermarking", it sets up beforehand so that it may not usually be displayed). (when this directions information is inputted from the input section 3) Moreover, when the directions information on a purport that a user wishes the related information (related information about the author and work of these pictures) of this pictures picture when this pictures picture is displayed is inputted from the input section 3 CPU1 reads the related information currently embedded as "digital watermarking" in the pictures picture to which it corresponds in the aforementioned image recording equipment 2. it is displayed on child screen 4b of a display 4 in written form -- making ("xxx ..." in child screen 4b of drawing 1 showing the character) -- or a voice output is carried out from a loudspeaker 5 A user can choose [on which related information is displayed in written form / or or] whether a voice output is carried out. Moreover, you may be made to carry out the voice output of the related information at the same time it carries out a character output. Moreover, when carrying out character representation of the related information, you may make it make it display not into child screen 4b but into parent screen 4a.

[0013] Operation gestalt 2. drawing 3 is the block diagram showing the operation gestalt 2 of this invention. In drawing 3 , the same sign is given to the portion which is mostly common in drawing 1 . In drawing 3 , CPU1, the input section 2, a display 4, and a loudspeaker 5 are the components of the personal computer (personal computer) which a user uses. Moreover, in drawing 3 , the transceiver section (for example, it consists of a modem, a terminal adapter, etc.) for 11 connecting to this Internet 11 the Internet (information communication network wide opened by the public), and 12 connecting CPU (personal computer)1 to it, the server (computer for network administration) by which 13 was connected to the Internet 11, and 14 are mass image recording equipment connected to this server 13. A lot of image information and the related information embedded as "digital watermarking" into the image information are recorded on this image recording equipment 14 like the image recording equipment 2 of drawing 1 .

[0014] With this operation gestalt 2, a user does not access the recording device linked to the personal computer at hand, but accesses a server 13 and image recording equipment 14 through the Internet 11. And through a network, by methods, such as download, it is made to transmit and "the image information of pictures and the related information embedded as digital watermarking into this pictures picture" recorded on image recording equipment 14 are ordered. A user displays the aforementioned pictures picture on parent screen 4a of the aforementioned "aforementioned pictures image information and related information" which were ordered to the display 4 first (in this system, since the aforementioned related information is recorded as "digital watermarking", it sets up beforehand so that it may not usually be displayed). Next, a user inputs the directions information on to that effect, when it hopes that he wants to know the related information of this displayed pictures picture. Then, based on this directions information, CPU1 is the method of character representation or a voice output, and outputs the related information embedded into the aforementioned pictures picture.

[0015] Operation gestalt 3., next the operation gestalt 3 of this invention are explained based on drawing 4 . In drawing 4 , the same sign is given to the portion which is mostly common in drawing 1 . The primary difference of this operation gestalt 3 and the operation gestalt 1 is the point that the contents of record of image recording equipment 22 differ for a while. Namely, with this operation gestalt 3, image recording

equipment 22 not only records "one picture" and "the related information (information on digital watermarking) corresponding to the one picture" which are displayed on parent screen 4a of a display 4, but is recording the above "the picture of a certain particular part in one picture", and "the related information (information on digital watermarking) corresponding to the picture of the particular part." When drawing 4 is explained to an example, namely, image recording equipment 22 Beforehand Existing "the picture of a particular part" (picture 4c of a certain person in the picture currently displayed on the whole parent screen 4a) and the "other other pictures of a portion" (picture of a part for a background, and the portion of 4d of other persons) in "one picture" (picture currently displayed on the whole parent screen 4a) displayed on a screen It considers as data mutually, and the related information to separate and which is the particular-part picture is embedded by digital watermarking, and it is made make it like (only for the aforementioned particular-part picture 4c to be separated from other portions, and for ** to be extracted), and to record it into the particular-part picture separated (extraction). Therefore, when a user appreciates the pictures picture recorded on this image recording equipment 22, a user displays first the pictures picture for which it wishes on parent screen 4a of a display 4 (in this system, since the aforementioned related information is recorded as "digital watermarking", it sets up beforehand so that it may not usually be displayed). And it is performed as follows, when the user wanted to output the related information of this person 4c that wants to know a certain specific person in one picture displayed on parent screen 4a (for example, person who shows by sign 4c of drawing 4) and it wants. That is, a user specifies the aforementioned particular-part picture (specific person's picture) 4c in one picture displayed (for example, as shown in drawing 4 , arrow 4e of cursor is moved to the place of specific person 4c, and it clicks with pointing devices, such as a mouse), and operates it for outputting the related information of the particular-part picture (a specific person's picture). Then, CPU1 carries out character representation of the related information of the aforementioned particular-part picture 4c into child screen 4b etc., or carries out a voice output by the loudspeaker 5.

[0016] In addition, the technology for separating and extracting only specific objects, such as a specific person, animals and plants, a building, and a machine instrument, out of one certain picture here is explained. Such technology is already well-known. For example, Nikkei Industrial Daily as of December 7, 1997 is introducing the following technology in the report of the title of "being new technology by the still picture processing photographic subject, and a background to automatic-separation ****** and the IBM Japan information compression." That is, Communications Research Laboratory, "Ministry of Posts and Telecommunications, and the IBM Japan Tokyo fundamental-research center extracted photographic subjects, such as a person, a body, etc. in a still picture, and developed the technology of separating a background automatically. The carved picture is treated as parts, and picture reference can be performed based on it, and also it can use for contents (informational content) work. The developed technology divides into the fine block of about 6 pixels the picture downloaded to the computer. (Omission) the similar things are collected little by little, are reconfigurated, and the hair of the hair of extraction and a person, dress, a body, etc. are cut down for a profile " -- again -- Nikkei Industrial Daily as of December 22, 1997 -- "-- image data reference -- new hand method NTT etc. a color and a form -- photographic subject Automatic classification In the report of the title of a "picture" and "" of operation being a keyword substitute", the following the same and analogous

technology are introduced. That is, Communications Research Laboratory, "Ministry of Posts and Telecommunications, and IBM Japan also developed the technology for realizing same picture reference. Photographic subjects, such as a person, a body, etc. in a still picture, are cut down, and it dissociates with a background. Specifically, a picture is divided into a fine block, a profile is deduced from a color, a luminosity, texture, etc., and a person's head, dress, a building, etc. are extracted. "

[0017] Moreover, the following technology is introduced in the report of the title of "developing the video imaging technique which extracts the Matsushita Electric Industrial photographic subject from a background (1998/05/29)" also by "the Nikkei electronics (part for 1997 – the 1998 issue)" of the Nikkei Business Publications issue (in addition, the following text is quotation of the information acquired by Nikkei Electoronics Online Service of the Internet in fact). That is, "Matsushita electrical-and-electric-equipment industry was considered as the announcement to have developed the video photography technology "dual modulation-technique finder technology" which can start only a photographic subject's picture from a background on May 28, 1998. By next-generation digital broadcasting, such as ISDB (Integrated Services Digital Broadcasting), the application on condition of the image divided for every photographic subject is considered. This technology is a thing towards such movement. With this technology, the technique of catching a photographic subject's depth information using an infrared camera was adopted. First, the infrared laser which gave optical intensity modulation is irradiated at a photographic subject. An irradiation pattern is two kinds, although it shines on the right-hand side of a photographic subject and intensity is strong on a strong thing and strong left-hand side. A photographic subject is irradiated by turns and the irradiation pattern of two **** is photoed with the infrared camera combined with the camera for images. A photographic subject's depth is calculable from two kinds of pictures from which an irradiation pattern differs. Based on this depth information, a photographic subject is cut down from a background. (Omission of the rest) Copyright (C)1997 Nikkei Business Publications, Inc.All rights reserved"

[0018] As mentioned above, it is possible to separate and extract only specific monochrome, such as a certain specific person in "one still picture" (for application to be theoretically possible also about an "animation"), from other portions, such as a background. And it is possible to embed "the related information which explains the picture of the particular part" as digital-watermarking information into this separation and extracted "the picture of a particular part." And a user is while displaying the aforementioned "one still picture" (since the aforementioned related information is recorded as "digital watermarking"). Usually, by carrying out predetermined operation which can be beforehand set up so that it may not be displayed The particular-part picture in it is specified (for example, by moving arrow 4e of the cursor on the screen of a display 4 to the position of specific portrait image 4c which a user wishes, and clicking a mouse etc.). Specific portrait image 4c can be specified and the related information ("digital-watermarking" information) corresponding to the particular-part picture can be made to output in written form to a display (for it to display on child screen 4b), or sound (from a loudspeaker 5 to an output).

[0019]

[Effect of the Invention] ** As mentioned above, according to this invention, while a user displays one certain "picture", without being based on the database system which used the program for the conventional databases (software), the related information corresponding to the picture can be outputted with a character or voice. And since this

related information can be set up so that it may not be outputted, unless a user wishs A bird clapper can be prevented to hindrance in case a user does art appreciation (by the method which adds related information simply into image information like before). Since related information was also surely displayed together when displaying a picture, the displays of the related information were hindrance, such as a user's art appreciation. Moreover, since the above related information can distribute only the data of "the image information (that in which related information was written as digital watermarking)" embedded as digital watermarking by the network as it is (network circulation), it comes to be able to perform circulation of image information simple very (when it was going to sell conventionally the image information which attached related information, not only image information but systems, such as a program for databases corresponding to it, needed to be sold together). In this invention, the related information as digital watermarking embedded at the aforementioned image information moreover, the program for an output (program for reading "digital watermarking") Since what is necessary is just to incorporate separately to the terminal by the side of a user, as for the aforementioned "the image information (that in which related information was written as digital watermarking)", it is possible to make it manage and circulate separately from the aforementioned "program for outputting the related information embedded as digital watermarking." Therefore, the above "image information (that in which related information was written as digital watermarking.) If it is made to circulate on a network such "a thing which has data structure"" (for it to become data of a very small capacity since a program is not included), it comes to be able to perform circulation on the network of "image information with related information" very efficiently and simple. Conventionally, especially "image information" and "the related information relevant to the picture" "were recorded" as a respectively separate file, and on it, each other needed to be associated, those two files "needed to be managed [or]", and they "needed to transmit." "on the other hand -- this invention -- above -- the inside of "image information" -- "the related information relevant to the picture" -- digital watermarking -- carrying out -- it embeds" -- since it is made like, "image information" and "related information relevant to the picture" "can be recorded" as "one file" collectively Therefore, "image information" and "related information relevant to the picture" "can be managed [or]" as "one file", and "it can be made to transmit in this invention" (it circulates on a network). Therefore, it is very simplified and management and network circulation of "image information" and "the related information relevant to the picture" become easy (the above effect is applied similarly not only about invention of a claim 1 but each invention from a claim 2 to a claim 4).
** The related information only corresponding to the picture of the particular part in the "one picture" can be made to output again according to this invention, displaying one certain "picture." therefore -- for example, since the specific person is specified, he only wishes the related information and the related information is outputted with a character or voice when you wish the related information of a certain specific person in two or more persons currently displayed in the picture, displaying one pictures picture or an on-the-spot photo picture with a user for example, it is very convenient
** A user can make related music information output to sound by self hope (selection) by embedding the music information on relation into image information at this invention again, displaying a picture. Therefore, since BGM (background music) suitable for the picture etc. can be passed as related music information while displaying the picture, for example for art appreciation, the effect of art appreciation can be heightened.

** Further, by this invention, a transmitting person embeds related information, such as self-introduction and a recent-state report, into "a transmitting person's picture" appended to the conversation of an E-mail or a chat, and can append and transmit to an E-mail etc. And an addressee can make related information, such as self-introduction of a transmitting person and a recent-state report, output with a character, voice, etc. by self hope (selection) from the transmitting person picture appended to the E-mail which received. Therefore, according to this invention, communication between individuals, such as an E-mail and a chat, and between companies can be made into what was more substantial.
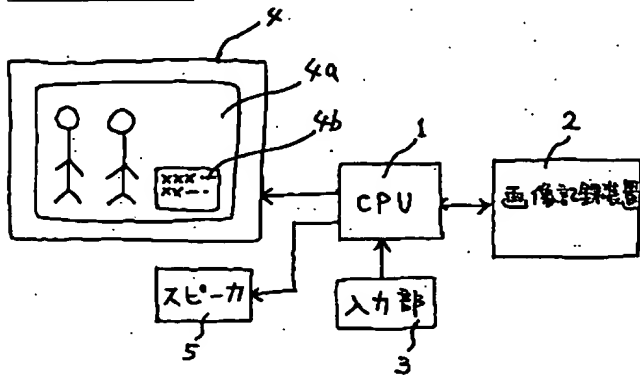

[Translation done.]

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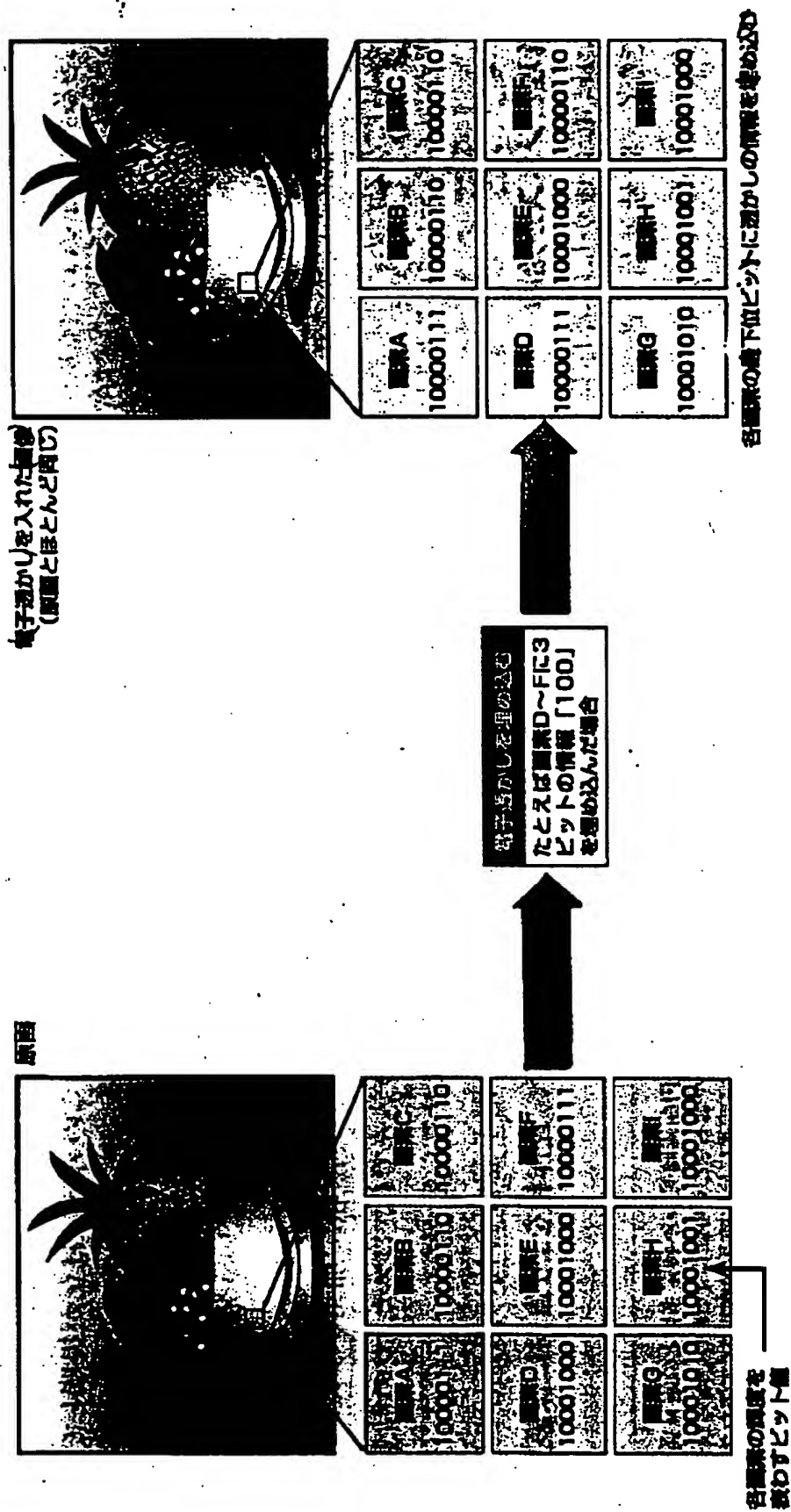damages caused by the use of this translation.

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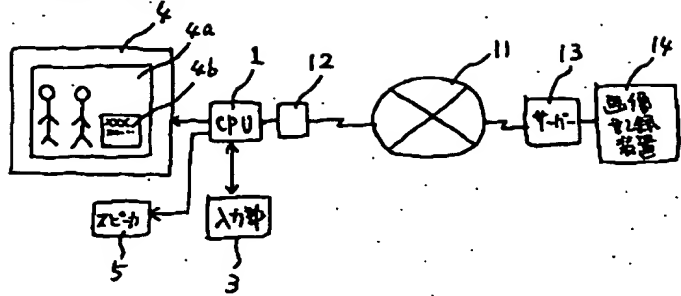3.In the drawings, any words are not translated.

DRAWINGS

[Drawing 1]

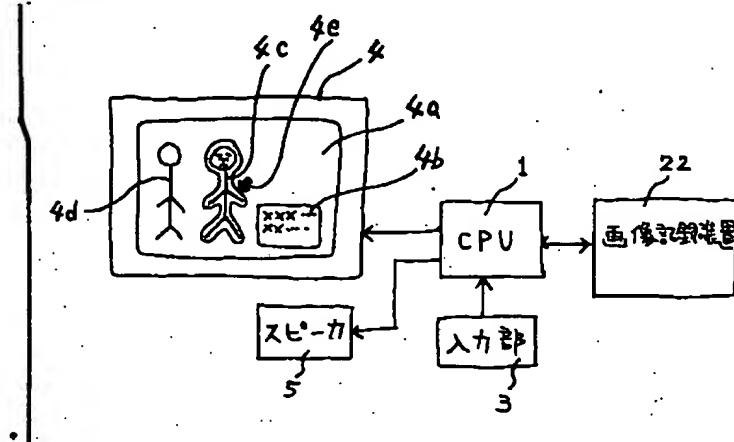
[Drawing 2]

[Drawing 3]

[Drawing 4]

[Translation done.]

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